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AGRICULTURE'S GROWING DRONE MARKET

Agriculture (/full-blog/category/Agriculture)

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Drones are fast becoming big business. One estimate declares that the global drone market will expand at a compound annual growth rate of 32% between 2015 and 2020, becoming a $5.6 billion industry.[i] Within the drone market, agriculture is one of the fastest growing areas. One recent report predicts the agricultural drone market will increase to a $4.2 billion by 2022.[ii] Another prediction claims:

> Drones will allow farming to become a highly data-driven industry, which eventually will lead to an increase in productivity and yields. Due to their ease of use and low cost, drones can be used for producing time series animations showing the precise development of a crop. Such analysis could reveal production inefficiencies and lead to better crop management. With those possibilities in mind, it can be assumed that this technology will transform agriculture into a high-tech industry for the first time, with decisions being based on real gathering and processing of data.[iii]

Several other firms have high expectations. Bank of America Merrill Lynch projects agriculture to make up almost 80% of the commercial drone market in the future.[iv] Goldman Sachs predicts in the next five years, that the agriculture sector will be the largest user of drones in the U.S., and the second largest in the world.[v]

The tremendous growth in the drone/UAS (unmanned aircraft system) industry will necessitate new regulations and legislation. Already, Congress has passed the FAA Modernization and Reform Act; the FAA has updated regulations and rules; and several states and communities have created new laws. Though, with the new regulations and laws, the courts have been called into action. In *Singer v City of Newton*, a federal judge heard the case involving a drone pilot, Michael S. Singer, and the City of Newton, Massachusetts.[vi] Singer sued Newton for attempting to require registration of all drones, preventing drone flight below 400 feet over private property without the owner's express permission, and forbidding drone flight over public property without permission from Newton.[vii] Singer also challenged a fourth subsection of the ordinance which was preempted by the FAA's visual observer rule as well as a related waiver process.[viii]

Summing up the facts of the case, the City of Newton created an ordinance to regulate drones for the purpose of promoting safety and preventing disturbances.[ix] Furthermore, the city of Newton intended this section "to be read and interpreted in harmony with all relevant rules and regulations of the Federal Aviation Administration, and any other federal, state and local laws and regulations."[x] Singer was a certified small unmanned aircraft pilot, as required for commercial, non-hobbyist pilots by the FAA (the category which applies to agricultural drone pilots).[xi] Singer challenged four subsections of the ordinance, three of which are briefly examined.

Singer's first challenge was the requirement for all drone pilots to register with the city. The FAA had already issued an interpretation of its rules stating "Federal registration is the exclusive means for registering UAS for purposes of operating an aircraft in navigable airspace, no state or local government may impose an additional registration requirement on the operation of UAS in navigable airspace without first obtaining FAA approval."[xii] Since Newton did not request nor receive FAA approval, the court held Newton's ordinance requiring registration was preempted.[xiii]

In the second and third challenges, Singer claimed that Newton effectively banned all drone flight above the city without prior permission. Congress assigned the FAA the task of "develop[ing] a comprehensive plan to safely accelerate the integration of civil unmanned aircraft systems into the national airspace system."[xiv] The FAA compiled and adopted a regulation requiring drone operators to maintain an altitude at or below 400 feet from the ground or any structures.[xv] By Newton banning flight under 400 feet over private property without the owner's consent, and banning flight over public property without permission from Newton, the city frustrated Congress' goals and the FAA's attempt to integrate drones into the national airspace.[xvi] The court held this "essentially constitutes a wholesale ban on drone use in Newton" and thus both subsections were preempted.[xvii]

While this ruling only directly impacts the ordinance in Newton, many cities watched this decision before they passed their own laws. Additionally, drone operators on social media have celebrated this ruling, hoping they can avoid duplicitous city, state and federal laws and regulations.[xviii] According to Doug Johnson, Consumer Technology Association's (https://www.cta.tech/News/Press-Releases/2017/September/Court-Ruling-on-FAA-Jurisdiction-Will-Boost-U-S-D.aspx) VP of Tech Policy, the ruling "establishes a rock-solid affirmation that the federal government unequivocally holds jurisdiction over the drone industry."[xix]

[i] Leo Sun, *Drones in 2016: 4 Numbers Everyone Should Know*, Motley Fool (Feb. 29, 2016, 4:10 PM), https://www.fool.com/investing/general/2016/02/29/drones-in-2016-4-numbers-everyone-should-know.aspx.

[ii] Jason Reagan, *Report: Agriculture Drone Market May Exceed $4 Billion*, Dronelife (Oct. 5, 2017), https://dronelife.com/2017/10/05/report-agriculture-drone-market-may-exceed-4-billion/.

[iii] *Drones Will Transform Farming into a Data-Driven Industry*, Research and Markets (Dec. 5, 2016), https://www.researchandmarkets.com/blog/agricultural-drones.

[iv] *Id.*

[v] *Id.*

[vi] No. 17-10071-WGY, 2017 U.S. Dist. LEXIS 153844 (D. Mass. Sept. 21, 2017).

[vii] *Id.* at *10-12.

[viii] *Id.* at *14.

[ix] *Id.* at *4.

[x] *Id.* (quoting Newtown, Mass., Ordinances § 20-64).

[xi] *Id.* at *3.

[xii] *Id.* at *11 (quoting *State and Local Regulation of Unmanned Aircraft Systems (UAS) Fact Sheet*, FAA, at 2 (Dec. 17, 2015), https://www.faa.gov/uas/resources/uas_regulations_policy/media/uas_fact_sheet_final.pdf).

[xiii] *Id.* at *12.

[xiv] *Id.* at *13 (quoting FAA Modernization and Reform Act of 2012, 49 U.S.C. § 40101).

[xv] *Id.*

[xvi] *Id.*

[xvii] *Id.*

[xviii] John Goglia, *Federal Judge Overturns City Drone Ordinance in First Ruling of Its Kind*, Forbes (Sept. 21, 2017, 7:00 PM), https://www.forbes.com/sites/johngoglia/2017/09/21/federal-judge-overturns-city-drone-ordinance-in-first-ruling-of-its-kind/#6037431e1217.

[xix] Mariella Moon, *Ruling Gives FAA More Power Over Drones Than Local Governments,* Engadget, (Sept. 24, 2017) https://www.engadget.com/2017/09/24/faa-drone-regulations-lawsuit-newton/.

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